UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/529,339	09/16/2005	Grant Stuart Richardson	41577/314121 8890		
23370 IOHN S. PR A T	7590 05/24/200	EXAMINER			
KILPATRICK	OHN S. PRATT, ESQ KILPATRICK STOCKTON, LLP			DIXON, ANNETTE FREDRICKA	
	1100 PEACHTREE STREET ATLANTA, GA 30309		ART UNIT	PAPER NUMBER	
,			3771		
			MAIL DATE	DELIVERY MODE	
			05/24/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary		Application No.	Applicant(s)			
		10/529,339	RICHARDSON ET AL.			
		Examiner	Art Unit			
		Annette F. Dixon	3771			
Period fo	The MAILING DATE of this communication app or Reply	ears on the cover sheet with the c	orrespondence address			
WHIC - Exter after - If NC - Failu Any	ORTENED STATUTORY PERIOD FOR REPLY CHEVER IS LONGER, FROM THE MAILING DATE of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. It is period for reply is specified above, the maximum statutory period were to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing and patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tin vill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).			
Status						
1)⊠	Responsive to communication(s) filed on <u>25 March 2005</u> .					
′=	This action is FINAL . 2b)⊠ This action is non-final.					
3)	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.					
Dispositi	on of Claims					
5)□ 6)⊠ 7)□	Claim(s) 1-14 is/are pending in the application. 4a) Of the above claim(s) is/are withdraw Claim(s) is/are allowed. Claim(s) 1-14 is/are rejected. Claim(s) is/are objected to. Claim(s) are subject to restriction and/or	vn from consideration.				
Applicati	on Papers					
10) 🖾	The specification is objected to by the Examine The drawing(s) filed on 25 March 2005 is/are: a Applicant may not request that any objection to the Replacement drawing sheet(s) including the correction to the oath or declaration is objected to by the Example 1.	a)⊠ accepted or b)□ objected to drawing(s) be held in abeyance. See ion is required if the drawing(s) is obj	e 37 CFR 1.85(a). lected to. See 37 CFR 1.121(d).			
Priority u	ınder 35 U.S.C. § 119					
12) ⊠ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ⊠ All b) □ Some * c) □ None of: 1. ☒ Certified copies of the priority documents have been received. 2. □ Certified copies of the priority documents have been received in Application No 3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.						
Attacher						
2) Notic	e of References Cited (PTO-892) e of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO/SB/08) r No(s)/Mail Date <u>5/26/05</u> .	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:	ate			

Art Unit: 3771

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

2. The disclosure is objected to because of the following informalities: On page 17, Line 11, Examiner believes "tot he" is a misspelling. Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.

Application/Control Number: 10/529,339

Art Unit: 3771

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

Page 3

- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (I) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) <u>Title of the Invention</u>: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) <u>Cross-References to Related Applications</u>: See 37 CFR 1.78 and MPEP § 201.11.
- (c) <u>Statement Regarding Federally Sponsored Research and Development:</u> See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc:
 The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- (f) <u>Background of the Invention</u>: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

Art Unit: 3771

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

- (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- gneral statement of the invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) <u>Brief Description of the Several Views of the Drawing(s)</u>: See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) <u>Claim or Claims</u>: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR

Art Unit: 3771

1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (I) Sequence Listing, See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims XXX are rejected under 35 U.S.C. 102(e) as being anticipated by Kay (6,729,331).

Application/Control Number: 10/529,339

Art Unit: 3771

As to Claim 1, Kay discloses a valve member (36) for a respirator comprising a valve body having an valve outlet portion (7) and a valve inlet portion (30) which together define a valve cavity for a valve mechanism permitting gas flow from the valve inlet portion (30) to the valve portion member (36), an air purge means (the combination of elements 12, 18, and 19; Column 5, Lines 49-61) comprising a purge inlet connectable to an air pressure supply means (defined by the pressure differential between the first and second chambers, elements 31 and 39 respectively) an air purge outlet (23) and an air deflection means (9) in which the deflection means is spatially arranged relative to the valve mechanism (36) and purge outlet (23) so that, in use, air exiting the purge outlet (23) and incident the air deflection means provides a curtain of air over the valve mechanism

As to Claim 3, Kay discloses the valve inlet portion (30) provides a seat (5) for the valve mechanism.

As to Claim 4, Kay discloses the purge inlet and outlet is associated with the valve inlet portion via the fluid communication of gaseous fluids.

As to Claim 5, Kay discloses the deflection means (9) is associated with the valve outlet portion (7) via the fluid communication of gaseous fluids.

As to Claim 6, Kay discloses the purge outlet (23) comprises one or more bores or channels in an upper surface of the valve inlet portion. (Figure 1)

As to Claim 14, Kay discloses the valve mechanism (36) comprises a membrane (6).

Application/Control Number: 10/529,339

Art Unit: 3771

Claim Rejections - 35 USC § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 - 1. Determining the scope and contents of the prior art.
 - 2. Ascertaining the differences between the prior art and the claims at issue.
 - 3. Resolving the level of ordinary skill in the pertinent art.
 - 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 7. Claims 2 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay (6,729,331).

As to Claim 2, Kay discloses a valve assembly comprising all the recited elements, yet does not expressly discloses the structural orientation of the valve body to be in a cylindrical shape. However, at the time the invention was made the use of a cylindrical shape of a valve member was well known to assist in creating a laminar flow profile. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kay to include the cylindrical shape to enable smooth transitions of flow, as the Applicant has done. Moreover, Applicant has not asserted that the specific structural orientation of the valve assembly provides a particular advantage, solves a stated problem, or serves a particular

Art Unit: 3771

purpose, thus the structural orientation of the valve assembly lacks criticality in its design.

As to Claim 7, Kay discloses a valve assembly with one or more bores, yet does not expressly disclose the width of the bores or channels towards the outlet portion. However, at the time the invention was made the specific width of the bores would be designed to enable effective flow of air through the system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kay to a specific width thereby providing for smooth laminar flow during operation, as the Applicant has done. Moreover, Applicant has not asserted that the specific width of the bores provides a particular advantage, solves a stated problem or serves a particular purpose, thus the specific width of the bores lacks criticality in its design.

8. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay (6,729,331) in view of Welker (5,769,388).

As to Claims 8-13, Kay discloses a valve assembly comprising all of the recited elements, yet does not expressly disclose the use of vanes toward the valve inlet providing for flow regulation and deflection of airflow within the valve assembly. However, at the time the invention was made, the use of the recited elements were well known. Specifically, Welker discloses the use of a flow diffuser utilized in combination with a valve assembly to assist in the gas flow profiling of the air passing through the valve assembly. Thereby, utilizing vanes to control the flow of the air through the valve

Art Unit: 3771

assembly producing laminar flow patterns (Abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kay to include the particulars of the air deflector to enable the flow profile of air to have smooth and laminar characteristics.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

MacNeil (3,633,611), Suchy (4,608,976), and Kolenc (5,215,286).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annette F. Dixon whose telephone number is (571) 272-3392. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3771

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Annette F Dixon Examiner

Art Unit 3771

JUŠTINE R. YU SUPERVISORY PATENT EXAMINER

TECHNOLOGY CENTER 3700

5/23/07